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FOR

Automated Volume License Agreement
Method And Apparatus

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BACKGROUND OF THE INVENTION

5   1.   Field of the Invention

The present invention relates generally to electronic commerce for electronic products. In particular, the present invention relates to technology that automates the management of volume license agreements for electronic products.

2.   Background Information

10   Business corporations and other enterprises are one of the largest consumers of packaged software as well as numerous other types of electronic products, including electronic databases, books, digital video, electronic works of art, electronic graphics, electronic magazines and brochures, and digital audio creations and recordings. The Software Information Industry Association reports

15   that businesses in the United States spent $24 billion dollars on business software products installed on personal computer platforms last year alone. (*Packaged Software Industry Revenue and Growth*, Software Information Industry Association, *http://www.siia.net/pubs/research/softwareoverview.htm*). Since businesses typically need to purchase hundreds or even thousands of copies of a particular product, they are

20   often able to negotiate a volume license agreement ("VLA").

A VLA offers volume discounts for electronic products based on measures such as the actual number of client computers (also referred to as seats) on which the product is installed. For example, Microsoft Corporation offers its customers multiple types of VLAs. For customers with 1,000 or more seats and mixed product

25   requirements, they offer tiered pricing with discounts based upon forecasted volume. Such agreements can be difficult to administer, particularly since the price of a

particular product can fluctuate periodically depending on whether the customer's actual purchases under the VLA meet the forecasted volume.

As a result of their tremendous investment in licensed electronic products, large corporate enterprises are increasingly negotiating VLAs as a way to control

5   costs. In order to administer the VLAs, the corporate enterprise must continually monitor purchases in order to reap the full benefit of the volume discounts. Typically, VLAs are manually negotiated between a corporate customer **140** and a distributor **120** using the corporate reseller **130** as a liason. Once a VLA is negotiated, the publisher **110** issues a master license to the corporate customer **140**

10   under which individual seat licenses are purchased. Each individual purchase generates its own transaction which must be reconciled under the master license to obtain the benefit of the VLA discount. For example, in a VLA covering mixed product offerings and using a tiered pricing discount based on forecasted volume (such as that offered by Microsoft), the publisher **110** assigns point values to each

15   purchased product and places the corporate customer **140** at a certain discount step depending on the number of accumulated points. For example, an accumulation of 50,000 points might entitle the corporate customer **140** to placement in the 10% discount step, and of 100,000 points, to a placement in the 15% discount step, and so forth.

20   Today, the corporate customer **140** employs corporate resellers **130** to continually monitor their purchases and negotiate the movement from one discount step to another to insure that the corporate customer **140** is getting the best price under their VLA. Some VLA discounts may even be retroactive depending on the publisher's **110** or corporate reseller's **130** rules for administering the VLA.

25   Therefore, accurate monitoring is extremely important as it can result in a significant savings for large enterprises. As a consequence, the cost of monitoring is labor

intensive and reduces the potential savings to corporate customers **140** under the VLA.

Since prior art methods of administering VLAs are manual, they also do not take advantage of recent advances in the technology for licensing software and

5   other electronic products, including the use of electronic commerce to electronically manage and distribute licenses for software and other and electronic products installed on remote computers. By not tracking the electronic purchase or distribution of a particular product, business administrators lose valuable opportunities for obtaining timely pricing discounts and controlling electronic asset

10   costs by tracking and reconciling the electronic purchases of products sold under their VLAs.

Accordingly, a new approach for providing automated management of VLAs that facilitates timely discount pricing is desirable. An automated VLA can monitor purchases under the VLA in real-time and insure that corporate customers **140** are

15   always presented with the lowest possible cost products that are available under the terms of the VLA. An automated VLA can also enable publishers **110** to provide more up-to-date information about product offerings under the VLA, and enable distributors **120** and their corporate customers **140** to competitively negotiate and modify VLAs more rapidly in response to changing market conditions. The role of

20   the corporate reseller **130** may be sharply reduced, if not completely eliminated, by facilitating the direct communication between the publisher **110** and corporate customer **140**. The integration of the management of VLAs with electronic commerce in a user-friendly way presents a unique set of challenges, requiring a new and novel solution.

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SUMMARY

According to one aspect of the invention, a method is provided in which a purchase history for a product is recorded pursuant to a stored volume license agreement. The method further provides for generating a purchase price in

5   accordance with both the volume license agreement and the purchase history. In response to a purchaser request, the method further provides for transacting the purchase of the product for the generated purchase price.

BRIEF DESCRIPTION OF DRAWINGS

The present invention will be described by way of exemplary embodiments,

10   but not limitations, illustrated in the accompanying drawings in which like references denote similar elements, and in which:

Figure 1 illustrates an overview of the prior art scenarios for negotiating and administering a VLA;

Figure 2 illustrates an overview of the present invention and operating

15   environment configured in accordance with one embodiment

Figure 3 illustrates a block diagram of the functional components of the present invention in accordance with one embodiment;

Figure 4 illustrates a general-purpose computer system upon which an embodiment of the present invention may be implemented;

20   **Figure 5** illustrates a block diagram of a typical scenario in which the present invention may be used in accordance with one embodiment;

Figure 6 illustrates an example of a Order page in accordance with one embodiment.

DETAILED DESCRIPTION OF THE INVENTION

      In the following description various aspects of the present invention, an automated volume license agreement (hereinafter "AVLA") method and apparatus, will be described. Specific details will be set forth in order to provide a thorough

5   understanding of the present invention. However, it will be apparent to those skilled in the art that the present invention may be practiced with only some or all of the described aspects of the present invention, and with or without some or all of the specific details. In some instances, well known features may be omitted or simplified in order not to obscure the present invention.

10   Various operations will be described as multiple discrete steps performed in turn in a manner that is most helpful in understanding the present invention. However, the order of description should not be construed as to imply that these operations are necessarily performed in the order they are presented, or even order dependent. Lastly, repeated usage of the phrase "in one embodiment" does not

15   necessarily refer to the same embodiment, although it may.

      Referring now to **Figure 2**, wherein an overview of the AVLA method and apparatus **200** in an operating environment configured in accordance with one embodiment is shown. As illustrated, publishers A and B **110** as well as distributors C and D **120**, in communication with an AVLA Clearinghouse **210**, either via a

20   secure network connection **220** or over the Internet **230**, or a combination thereof, creates or updates an electronic VLA for storage in the AVLA Clearinghouse **210**. The electronic VLA reflects the negotiated VLA between the customer **140** and the publisher **110**. The publishers A and B further update the information about the products offered under the VLA to the AVLA Clearinghouse **210**. The corporate

25   AVLA server **250**, in communication with the AVLA Clearinghouse **210** over the Internet **230** pulls a copy of their VLA through firewall **240** for storing on AVLA

server **250** and for processing in response to purchase requests by corporate AVLA

clients User 1 and User2 **260**. Using the product's purchase history the corporate

AVLA server prices the requested product and facilitates the transaction of the

purchase by the corporate AVLA clients **260**. Depending on the location of the

5   AVLA users 1 and 2 **260** the pricing and transaction of the purchase of the

electronic product may occur between an AVLA server **250** and AVLA client **260**

residing within a local area network **270,** or may occur between an AVLA server **250**

and AVLA client **260** residing within an external network served by a remote server

(not shown), or some variation of the foregoing configuration.

Referring now to **Figure 3**, wherein a block diagram illustrating the functional

components of the AVLA method and apparatus are shown. The functional

components include an AVLA rules engine **310**, an AVLA pricing monitor **320**, an

AVLA purchaser interface **330**, and an AVLA transaction database **340**. Some of

the functions performed by the AVLA rules engine **310** include accessing the VLAs

15   pulled from the AVLA Clearinghouse **210**, extracting and maintaining the rules for

automating the VLA, including, for example, the points credited for each product

offered under the VLA, the number of points required for each discount step, and

the percentage discount associated with each discount step. Some of the functions

performed by the AVLA pricing monitor **220** include accessing the historical

20   purchasing data for a requested product, determining whether the discount step is

current, and modifying the discount step, if necessary, in conjunction with the AVLA

rules engine **310** and the historical purchasing data. In one embodiment, another

function of the AVLA rules engine is to further determine whether discount pricing is

available based on a profile of the AVLA client/user **260** requesting the product, to

25   insure that only the appropriate AVLA client/users **260** are able to view and

purchase products at that discounted price. Some of the functions performed by the

AVLA purchaser interface **330** include, obtaining the current discount step from the AVLA pricing monitor **320** and dynamically calculating and displaying the current price of a product in response to a purchase request by a AVLA client/user **260**. The AVLA purchaser interface **330** is also responsible for maintaining the historical purchase data on the AVLA transaction database **340** for each product purchased under a VLA, and for facilitating the transaction of the purchase in response to a request by a AVLA client/user **260**.

The AVLA rules engine **310** and AVLA pricing monitor **320** perform together in conjunction with historical purchase data stored on the AVLA transaction

10   database **340** to provide the current product pricing information to the AVLA purchaser interface **330**. In one embodiment, the AVLA purchaser interface **330** in operation with an electronic product catalog (not shown) provides the AVLA client/user **260** with an entry point into the AVLA through which the AVLA client/users **260** interact with the AVLA rules engine **310**, AVLA pricing monitor **320**,

15   and AVLA transaction database **340**. In one embodiment, the AVLA purchaser interface **330** may use the browser facilities of the platform upon which the AVLA is implemented. An alternative embodiment may be implemented as a separate application program that uses the graphical user interface facilities of the platform's operating system. The AVLA transaction database **340** is the repository for storing

20   persistent data for the purchases of products under a VLA and processed by these other functional components. The AVLA transaction database **340** may be comprised of one physical database or a combination of different physical databases depending on the configuration of the various server and client computers on which the AVLA method and apparatus is implemented.

25   Referring now to **Figs. 2** and **3** together, it should be understood that some or all of the above-described component functions **310**, **320**, **330**, or **340** may be

performed by one or more of the various corporate AVLA servers **250**, and that

some of the component functions may be performed by the AVLA clients **260**.

Furthermore, the functional components may reside on the AVLA clients **260** and/or

AVLA servers **250**, and/or the AVLA Clearinghouse **210**, all of which communicate

5   over a local area network **270** as shown, or over the Internet **230**, or over a wide

area network or combination of networks, or any other network configuration

capable of connecting them. The physical database(s) comprising the AVLA

transaction database component **340** may reside on one or more of the various

AVLA servers **250**, and portions of the database(s) may be replicated on one or

10   more of the various AVLA clients **260** and periodically synchronized as needed with

the data residing on the servers.

Referring now to **Figure 4**, wherein a block diagram of a general-purpose

computer system upon which an embodiment of the present invention may be

implemented is shown. As illustrated, general-purpose computer system **400**

15   comprises a bus **401**, or other communications hardware and software, for

communicating information, and a processor **402** coupled with bus **401** for

processing information. Computer system **400** further comprises a random access

memory (RAM) or other dynamic storage device **402** (referred to as main memory),

coupled to bus **401** for storing information and instructions to be executed by

20   processor **402**. Computer system **400** also comprises a read only memory (ROM)

403, and/or other static storage device, coupled to bus **401** for storing static

information and instructions for processor **402**. Mass storage device **404** is coupled

to bus **401** for storing information and instructions. In one embodiment, mass

storage device **404** includes a library of historical purchasing data and VLA rules

25   used to automate the VLA under which the products are purchased by the various

AVLA client/users **260**.

Furthermore, mass storage device **404**, such as a magnetic disk or optical disk, and its corresponding disk drive, can be coupled to computer system **400**. Computer system **400** can also be coupled via bus **401** to a display device **421** for displaying information to a computer user such as a network manager. Display

5   device **421** is used to display windows containing a graphical user interface to information about the available products for which pricing and purchasing is facilitated by the AVLA method and apparatus. Display device **421** can include a frame buffer, specialized graphics rendering devices, a cathode ray tube (CRT), and/or flat pane display. An alphanumeric input device **422**, including alphanumeric

10   and other keys, is typically coupled to bus **401** for communicating information and command selections to processor **405**. Another type of user input device is cursor control device **423**, such as a mouse, a trackball, a pen, a touch screen, or cursor direction keys for communicating direction information and command selections to processor **405**, and for controlling cursor movement on display device **421**. This

15   input device typically has two degrees of freedom in two axes, a first axis (e.g., the x-axis) and a second axis (e.g., the y-axis), which allows the device to specify positions in a plane. However, this invention should not be limited to input devices with only two degrees of freedom.

Another device that may be coupled to bus **401** is a hard copy device **424**

20   which may be used for printing instructions, data, or other information on a medium such as paper, film, or similar types of media. Additionally, computer system **400** can be coupled to a device for sound recording, and/or playback **425**, such as an audio digitizer coupled to a microphone for recording information. Further, the device may include a speaker that is coupled to a digital to analog (D/A) converter

25   for playing back the digitized sounds.

Network interface card **426** is coupled to bus **401**. Network interface card **426** is further coupled to an external computer network (not shown). Network interface card **426**, in conjunction with appropriate data communications protocols (e.g., the TCP/IP suite of internetworking protocols), provide the means by which a

5   AVLA method and apparatus operating on a general-purpose computer system **400** exchanges information with other devices coupled to the same computer network. Modem **427** is coupled to bus **401**, and provides an alternate means of exchanging information with other devices for which a modem connection to an external computer network or device (not shown) can be established.

10   Computer system **400** and AVLA application software stored and executed therein as part of the AVLA method and apparatus operate in conjunction with an operating system with graphics capability, such as Microsoft's Windows operating system. Commercially available computer systems implementing the features of general-purpose computer system **400** include a broad range of operating system-

15   based computers, including server computers, desktop computers, workstations, devices, or appliances. Furthermore, the present invention may be used in conjunction with various browser (e.g. Microsoft Internet Explorer or Netscape Navigator) and electronic mail applications (e.g. Microsoft Outlook, and Lotus Notes) or other messaging applications to yield an operational AVLA platform upon which

20   an embodiment of the present invention may be implemented.

Referring now to **Figure 5**, wherein a block diagram of a typical scenario in which the AVLA method and apparatus may be used in accordance with one embodiment, is shown. As illustrated, the process begins with publisher(s) A and B **110**, and/or distributor(s) C and D **120**, creating or updating a VLA **510** in the VLA

25   Clearinghouse **210**. The VLA may cover a variety of electronic products, including a

software application, electronic book, electronic work of art, electronic graphics item, electronic magazine or brochure, or digital video or audio creation or recording.

The AVLA client/user then selects one of the products for purchase **520** under the VLA pulled from the VLA Clearinghouse **210** by using the AVLA

5   purchaser interface **330**. The AVLA obtains the current applicable version of the VLA from the AVLA Clearinghouse **210** and the purchase history for the product selected by the AVLA client/user **260**. The AVLA then invokes the functions of the AVLA rules engine **310** and the AVLA pricing monitor **320** to determine the new discount step **530** to which the corporate customer **140** is entitled. The AVLA then

10 determines whether the old discount step currently in use by the AVLA purchaser interface **330** is current **540** (i.e. the same as the newly determined discount step). If not, then the AVLA dynamically updates the requested product prices displayed by the AVLA purchaser interface to reflect the new discount step **210** to which the corporate customer **140** is now entitled. The AVLA client/user **260** completes the

15 product purchase **560** using the best price available to the corporate customer **140** under the latest VLA from the AVLA clearinghouse **210**. Finally, the AVLA dynamically updates the product's purchase history data on the AVLA transaction database **340** to reflect the completed purchase.

Referring now to **Figure 6**, wherein one embodiment of an AVLA purchaser

20 interface **610** for obtaining pricing information and completing a purchase of products sold under a VLA is shown. Using a menu-based or other navigational aid, the AVLA client/user **260** desiring to purchase a license for a product sold under a VLA using the AVLA navigates the AVLA purchaser interface **330** to cause the display of an Order page **610**, as illustrated in **Figure 6**. The AVLA client/user **260**

25 can be any user authorized to purchase products for themselves or on behalf of another.

The Order page **610** contains, among other items, at least one input area **620** to enter or select information that will identify the product for which a license is desired. A command button or other graphical visual icon **630** ("Get Price") is provided for affirmatively entering a command to obtain the latest pricing information

5 for the selected product using the facilities of the AVLA. In a separate portion of the Order page **610** is provided an output area **640** to display the results of entering the command to obtain the latest pricing information. The AVLA client/user **260** is further provided with command button or other graphical visual icon 650 ("Purchase") to carry out the purchase after reviewing the price displayed in output

10 area **640**. The sequence of AVLA client/user interactions with the Order page **610** is summarized in **Table 1**. It should be understood that the Order page **610** as shown is for descriptive purposes only, and that other variations for accomplishing the described entry, selections or commands to the AVLA purchaser interface **330** may be employed without departing from the principles of or exceeding the scope of the

15 present invention.

Order
1. Navigate to the Order page;
2. Select/enter the identification of the product to be purchased;
3. Click the Get Pricing button to obtain the latest pricing information under the VLA for the selected product;
4. Review the current price; and, if acceptable
5. Click the Purchase button to complete the purchase.

Table 1

Accordingly, a novel method and apparatus is described for an automated volume licensing agreement method and apparatus to automate the pricing and

20 purchasing of products sold under volume license agreements.

EPILOGUE

From the foregoing description, those skilled in the art will recognize that many other variations of the present invention are possible. In particular, while the present invention has been described as being implemented in the AVLA servers **250**, and AVLA client/users **260**, some of the logic described in functional components **310**, **320**, **330**, and **340**, may be distributed in other components of a general-purpose computer system **400**. Thus, the present invention is not limited by the details described. Instead, the present invention can be practiced with modifications and alterations within the spirit and scope of the appended claims.